

DEC STD 045-0 Packaging Products for International Shipment - Introduction

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ABSTRACT: This document describes the principles of Digital's international packaging requirements for finished goods intended to be sold to customers. It includes specific instructions on how to determine packaging requirements by country of destination and mode of transport. It also contains information about contract crating and Digital's International Distribution Programs.

APPLICABILITY: This document defines mandatory requirements that apply to all Digital shipping facilities and departments involved with the international packaging, distribution, reception, or transportation of customer goods or products.

STATUS: APPROVED 30-NOV-1990; use VTX SMC for current status.

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1 INTRODUCTION

A consistent international packaging policy is needed throughout Digital's procurement and distribution system. This need arises from the multiplicity of manufacturers and manufacturing sites, the variety of transportation and storage conditions, global distribution, and limited information about handling equipment at the final destination.

1.1 PURPOSE

The purpose of this document is to ensure that the specified packaging protects Digital customer products from the time of manufacture, through transport and storage, to end-user delivery.

Because Digital products shipped internationally might be stored for indefinite periods in protected or unprotected storage, packaging must not only protect the item against physical damage but also against environmentally induced deterioration during the storage period. In many instances, packaging must also incorporate provisions for opening and reclosing for customs' inspection.

This document defines the level of packaging required for Digital products shipped internationally. Information on contract crating and international distribution programs is contained in subhead 3 and Appendix A, respectively.

1.2 OBJECTIVES

The objectives of Digital packaging are to maximize product protection at minimum packaging and distribution costs; and to achieve uniform, effective, and economical packaging designs.

Generally, these objectives require that similar items be packaged and marked in a similar way, and that the number and type of packaging requirements and packing materials be kept to a minimum, consistent with the desired protection. The resulting uniformity speeds up efficient procurement, receipt, storage, inventory, and transport of Digital equipment and supplies.

Excessive packaging (the use of extra or more expensive packing materials than are necessary to adequately protect an item) can be avoided by strict adherence to good packaging principles and by giving full consideration to storage, shipping, and end-use factors.

1.3 RESPONSIBILITIES

Industrial Package Engineering (IPE) is responsible for the interpretation of this standard. IPE is also the recognized authority for determining if a product is properly packed to withstand the hazards of international distribution channels.

2 PACKAGE SELECTION BY COUNTRY OF ORIGIN, DESTINATION, AND TRANSPORT MODE

Package requirements may differ for the same product, based on the country of origin, the shipping destination, and the mode of transport. Other factors that influence requirements are climatic changes, in-transit handling methods, and the anticipated storage duration and conditions.

In addition, any product considered or containing a hazardous material must be packaged in compliance with applicable national or international hazardous material regulations. Refer to EL-CP534-00, *Hazardous Materials/Dangerous Goods Policies and Procedures Manual*.

2.1 PRODUCT GROUPING

Packaged products are divided into the following groups.

Group:

A. Cabinets and Peripherals on Pallets

This group includes all products that normally have a cushioned or wood base pallet as an integral part of the final assembly. For more information, refer to subhead 3 of *DEC STD 045-1 Packaging Products for International Shipment - Design Requirements and Procedures*.

B. General Consolidation

This group includes all field service spares; mixed loads of assorted small packages, that is, hardware and options that are less than 0.056 cubic meters (2 cubic feet); personal computer system containers; and homogeneous products secured on pallets. For additional information, refer to EL-MF425-00, *Procedures for Packaging Products for International Shipment*.

C. Software/Documentation Consolidation

This group includes all software media (such as tapes and disks), literature, and assorted paper products.

NOTE

Special packaging is designed to meet the needs of interplant products/parts at various levels of assembly. Basic requirements for this group are described in *DEC STD 043-0 Packaging Requirements for Digital Products, Parts, Assemblies, and Materials*.

2.2 GUIDE TO PACKAGING LEVELS

The following identifies and describes the packaging levels specified in Tables 1 and 2.

For a detailed description of packaging levels, refer to DEC STD 045-1 and EL-MF425-00.

LEVEL:

1. Heavy Duty

Cleated plywood container with water/vaporproof barrier.

1a. Crated (without Water/Vapor Protection)

Cleated plywood container without water/vaporproof barrier.

2. Mid-Range

Triple-wall corrugated container, Class: weather resistant.

2a. Special Consolidated

Reusable pallet box, container, or handling device for special shipments.
Constructed to meet the requirements agreed to with users.

3. Lightweight

Package normally used in country of origin, without additional overpacking.

3a. Lightweight Homogeneous

Secured pallet loads of similar/like products with packaging normally
used in country of origin.

NOTE

The lower 18 inches of vertical package edges shall be protected by use of corner guards.

2.3 SELECTING PACKAGING LEVELS

The selection charts shown in Tables 1 and 2 shall be used for selecting packaging levels unless otherwise specifically requested by a customer, in which case a waiver to the standard is not required.

Table 1: Packaging Level Selection Chart - GIA Countries

GIA Countries		Product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
U.S.	ARGENTINA	A	2	1	na
		B	2	2	
		C	2	2	
	AUSTRALIA	A	2	1	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	BAHAMAS	A	2	2	na
		B	2	2	
		C	3	2	
	BARBADOS	A	1	1	na
		B	1	1	
		C	2	2	
	BANGLADESH	A	1	1	na
		B	2	1	
		C	2	2	
	BERMUDA	A	2	2	na
		B	2	2	
		C	3	3	
	BOLIVIA	A	1	1	na
		B	1	1	
		C	2	2	
	BORNEO	A	1	1	na
		B	1	1	
		C	2	2	

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

Table 1 (Cont.): Packaging Level Selection Chart - GIA Countries

GIA Countries		Product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
U.S.	BRAZIL	A	1a	1	na
		B	2	1	
		C	2	2	
	BRUNEI	A	1	1	na
		B	1	1	
		C	2	2	
	BURMA	A	1	1	na
		B	2	1	
		C	2	2	
	CANADA	A	2	na	3 or 3a
		B	3 or 3a		3 or 3a
		C	3 or 3a		3 or 3a
	CAYMAN	A	1	1	na
		B	2	1	
		C	2	2	
	CHILE	A	2 ³	1	na
		B	2 ³	1	
		C	2 ³	2	
	CHINA (PRC)	A	1 ⁴	1	na
		B	1 ⁴	1	
		C	1 ⁴	1	

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

³When possible, load height (including pallet) should not exceed 160 cm (63 inches). Limits are product dependent.

⁴Gross weight not to exceed 135 kilograms (300 pounds), product permitting.

Table 1 (Cont.): Packaging Level Selection Chart - GIA Countries

GIA Countries		Product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
U.S.	COLOMBIA	A	2	1	na
		B	2	1	
		C	2	2	
	COSTA RICA	A	2	1	na
		B	2	1	
		C	2	1	
	CURACAO	A	2	1	na
		B	2	1	
		C	2	1	
	GUATEMALA	A	1	1	na
		B	1	1	
		C	2	1	
	HAITI	A	2	1	na
		B	2	1	
		C	2	2	
	HONG KONG	A	2	1	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	INDIA	A	1	1	na
		B	1	1	
		C	1	1	
	INDONESIA	A	1 or 2 ⁵	1	na
		B	1 or 3 ⁵	1	
		C	1 or 3 ⁵	2	

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

⁵When products are shipped into Singapore and transshipped to Indonesia per special instructions noted on the delivery document.

Table 1 (Cont.): Packaging Level Selection Chart - GIA Countries

GIA Countries		Product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
U.S.	IVORY COAST	A	1	1	na
		B	2	2	
		C	2	2	
	JAPAN	A	2 ⁶	1	na
		B	2 ⁶	2	
		C	2 ⁶	2	
	KOREA	A	2	1	na
		B	2	1	
		C	2	2	
	PENINSULAR MALAYSIA	A	2	1	na
		B	2	1	
		C	3 or 3a	2	
	MEXICO	A	2	1	1
		B	2	1	2
		C	2	2	2
	MOZAMBIQUE	A	1	1	na
		B	2	1	
		C	2	2	
	NEW GUINEA	A	1	1	na
		B	1	1	
		C	2	2	

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

⁶When shipped door-to-door via air-freight container, Level 3 is acceptable.

Table 1 (Cont.): Packaging Level Selection Chart - GIA Countries

GIA Countries		Product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
U.S.	NEW ZEALAND	A	2	1	na
		B	3 or 3a	1	
		C	3 or 3a	2	
	NIGERIA	A	1	1	na
		B	1	1	
		C	1	1	
	PANAMA	A	2	1	na
		B	2	1	
		C	2	2	
	PAKISTAN	A	1	1	na
		B	2	1	
		C	2	2	
	PERU	A	1	1	na
		B	1	1	
		C	2	2	
	PHILIPPINES	A	1	1	na
		B	1	1	
		C	2	2	
	PUERTO RICO	A	2	1	na
		B	3	2	
		C	3	2	
	SENEGAL	A	1	1	na
		B	2	1	
		C	2	2	

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

Table 1 (Cont.): Packaging Level Selection Chart - GIA Countries

GIA Countries		Product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
U.S.	SINGAPORE	A	2	1	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	SOUTH AFRICA	A	2	1	na
		B	2	1	
		C	2	2	
	TAIWAN	A	1a	1	na
		B	1a	1	
		C	3 or 3a	2	
	THAILAND	A	1	1	na
		B	1	1	
		C	3 or 3a	2	
	TRINIDAD	A	2	1	na
		B	2	1	
		C	2	2	
	URUGUAY	A	1	1	na
		B	2	1	
		C	2	2	
	VENEZUELA	A	1 ⁷	1	na
		B	2 ⁷	1	
		C	2 ⁷	2	
	WEST INDIES	A	2	1	na
		B	2	1	
		C	2	2	

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

⁷The maximum container height for packages shipped by air into Venezuela (including the shipping pallet), is 208 cm (82 inches).

Table 1 (Cont.): Packaging Level Selection Chart - GIA Countries

GIA Countries		Product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
U.S.	ZIMBABWE	A	1	1	na
		B	2	1	
		C	2	1	
CANADA	GIA COUNTRIES	A			
		B	Same as U.S.		
		C			
	EUROPEAN COUNTRIES	A			
		B			
		C			
	U.S./CANADA	A	3 or 3a	na	3 or 3a
		B	3 or 3a	na	3 or 3a
		C	3 or 3a	na	3 or 3a
	HONG KONG	A	na	na	na
		B ⁸	2 ⁶	3a	
		C	na	na	
JAPAN	U.S./EUROPE	A	2	1	na
		B ⁸	2 ⁶	3a	
		C ⁸	2 ⁶	2	
PUERTO RICO	U.S./EUROPE	A	2	2	na
		B ⁸	2 or 2a	2 or 2a	
		C	2a	2a	

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

⁶When shipped door-to-door via air-freight container, Level 3 is acceptable.

⁸Refer to a specific 37-class product packaging specification as required by *DEC STD 044-0 Packaging Documentation Requirements* and to DEC STD 043-0.

Table 1 (Cont.): Packaging Level Selection Chart - GIA Countries

GIA Countries		Product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
SINGAPORE	U.S./EUROPE	A	na	na	na
		B ⁸	2 ⁶	3a	
		C ⁸	2 ⁶	2	
TAIWAN	U.S./EUROPE	A	na	na	na
		B ⁸	2 ⁶	3a	
		C ⁸	2 ⁶	2	

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

⁶When shipped door-to-door via air-freight container, Level 3 is acceptable.

⁸Refer to a specific 37-class product packaging specification as required by *DEC STD 044-0 Packaging Documentation Requirements* and to DEC STD 043-0.

Table 2: Packaging Level Selection Chart - European Countries

European Countries		Product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
U.S.	ALGERIA	A	1	1	na
		B	3 or 3a	1	
		C	3 or 3a	2	
	AUSTRIA	A	2	2	na
		B	2	2	
		C	2	2	
	BAHRAIN	A	1	1	na
		B	2	1	
		C	2	2	
	BELGIUM	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	CYPRUS	A	2	1	na
		B	2	2	
		C	2	2	
	CZECHOSLOVAKIA	A	2	1	na
		B	2	2	
		C	2	2	
	EGYPT	A	1	1	na
		B	2	2	
		C	2	2	
	ENGLAND	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

Table 2 (Cont.): Packaging Level Selection Chart - European Countries

European Countries		Product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
U.S.	FINLAND	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	FRANCE	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	WEST GERMANY	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	HUNGARY	A	2	2	na
		B	2	2	
		C	2	2	
	ICELAND	A	2	2	na
		B	2	2	
		C	2	2	
	IRAN	A	1	1	na
		B	1	1	
		C	2	2	
	IRELAND	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	ISRAEL	A	2	1	na
		B	2	2	
		C	2	2	

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

Table 2 (Cont.): Packaging Level Selection Chart - European Countries

European Countries		Product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
U.S.	ITALY	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	JORDAN	A	2	1	na
		B	2	2	
		C	2	2	
	KUWAIT	A	1	1	na
		B	2	1	
		C	2	2	
	LEBANON	A	1	1	na
		B	2	2	
		C	2	2	
	LIBYA	A	1	1	na
		B	2	2	
		C	2	2	
	LIECHTENSTEIN	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	LUXEMBOURG	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	MALTA	A	2	1	na
		B	2	2	
		C	2	2	

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

Table 2 (Cont.): Packaging Level Selection Chart - European Countries

European Countries		Product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
U.S.	MOROCCO	A	1	1	na
		B	2	2	
		C	2	2	
	NETHERLANDS	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	NORWAY	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	OMAN	A	1	1	na
		B	2	2	
		C	2	2	
	POLAND	A	2	2	na
		B	2	2	
		C	2	2	
	PORTUGAL	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	QATAR	A	1	1	na
		B	2	2	
		C	2	2	
	RUMANIA	A	2	2	na
		B	2	2	
		C	2	2	

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

Table 2 (Cont.): Packaging Level Selection Chart - European Countries

European Countries		Product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
U.S.	SAUDI ARABIA	A	1	1	na
		B	2	2	
		C	2	2	
	SCOTLAND (UK)	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	SPAIN	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	SWEDEN	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	SWITZERLAND	A	2	2	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	TUNISIA	A	1	1	na
		B	2	2	
		C	2	2	
	TURKEY	A	2	2	na
		B	2	2	
		C	2	2	
	UNITED ARAB REPUBLIC	A	1	1	na
		B	2	2	
		C	2	2	

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

Table 2 (Cont.): Packaging Level Selection Chart - European Countries

European Countries		product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
U.S.	U.S.S.R.	A	2	2	na
		B	2	2	
		C	2	2	
	NORTH AND SOUTH YEMEN	A	1	1	na
		B	2	2	
		C	2	2	
	YUGOSLAVIA	A	2	2	na
		B	2	2	
		C	2	2	

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

Table 2 (Cont.): Packaging Level Selection Chart - European Countries

European Countries		product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
European Manufacturing Plants and/or Distribution Centers	ALGERIA	A	1 ³	1 ³	na
		B	2	1 ³	
		C	2	2	
	AUSTRIA	A	2	na	3 or 3a
		B	3 or 3a		
		C	3 or 3a		
	BAHRAIN	A	1 ³	1 ³	na
		B	2	1 ³	
		C	2	2	
	BELGIUM	A	2	2	3 or 3a
		B	3 or 3a	2	3 or 3a
		C	3 or 3a	2	3 or 3a
	BULGARIA	A	2	1 ³	na
		B	2	2	
		C	2	2	
	CYPRUS	A	2	1 ³	na
		B	2	2	
		C	2	2	
	CZECHOSLOVAKIA	A	2	na	2
		B	2		2
		C	2		2

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

³Level 1 pack will be the responsibility of the distribution facility at which the product leaves Digital's control.

Table 2 (Cont.): Packaging Level Selection Chart - European Countries

European Countries		product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
European Manufacturing Plants and/or Distribution Centers	DENMARK	A	2	2	3 or 3a
		B	3 or 3a	2	3 or 3a
		C	3 or 3a	2	3 or 3a
	EGYPT	A	1 ³	1 ³	na
		B	2	2	
		C	2	2	
	ENGLAND	A	2	na	3 or 3a
		B	3 or 3a		3 or 3a
		C	3 or 3a		3 or 3a
	FINLAND	A	2	2	2
		B	3 or 3a	2	
		C	3 or 3a	2	
	FRANCE	A	2	na	3 or 3a
		B	3 or 3a		
		C	3 or 3a		
	WEST GERMANY	A	2	na	3 or 3a
		B	3 or 3a		3 or 3a
		C	3 or 3a		3 or 3a
	GREECE	A	2	1 ³	na
		B	2	2	
		C	2	2	
	HUNGARY	A	2	na	2
		B	2		2
		C	2		2

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

³Level 1 pack will be the responsibility of the distribution facility at which the product leaves Digital's control.

Table 2 (Cont.): Packaging Level Selection Chart - European Countries

European Countries		product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
European Manufacturing Plants and/or Distribution Centers	ICELAND	A	1 ³	1 ³	na
		B	3 or 3a	2	
		C	3 or 3a	2	
	IRAN	A	1 ³	1 ³	na
		B	2	2	
		C	2	2	
	IRELAND	A	2	na	3 or 3a
		B	3 or 3a		3 or 3a
		C	3 or 3a		3 or 3a
	ISRAEL	A	2	1 ³	na
		B	2	2	
		C	2	2	
	ITALY	A	2	1 ³	2
		B	3 or 3a	2	
		C	3 or 3a	2	
	JORDAN	A	2	1 ³	na
		B	2	2	
		C	2	2	
	KUWAIT	A	1 ³	1 ³	na
		B	2	2	
		C	2	2	

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

³Level 1 pack will be the responsibility of the distribution facility at which the product leaves Digital's control.

Table 2 (Cont.): Packaging Level Selection Chart - European Countries

European Countries		product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
European Manufacturing Plants and/or Distribution Centers	LEBANON	A	1 ³	1 ³	na
		B	2	2	
		C	2	2	
	LIBYA	A	1 ³	1 ³	na
		B	2	2	
		C	2	2	
	LIECHTENSTEIN	A	2	na	3 or 3a
		B	3 or 3a		3 or 3a
		C	3 or 3a		3 or 3a
	LUXEMBOURG	A	2	na	3 or 3a
		B	3 or 3a		3 or 3a
		C	3 or 3a		3 or 3a
	MALTA	A	2	1 ³	na
		B	2	2	
		C	2	2	
	MOROCCO	A	1 ³	1 ³	na
		B	2	2	
		C	2	2	
	NETHERLANDS	A	2	2	3 or 3a
		B	3 or 3a	2	3 or 3a
		C	3 or 3a	2	3 or 3a
	NORWAY	A	2	2	3 or 3a
		B	3 or 3a	2	3 or 3a
		C	3 or 3a	2	3 or 3a

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

³Level 1 pack will be the responsibility of the distribution facility at which the product leaves Digital's control.

Table 2 (Cont.): Packaging Level Selection Chart - European Countries

European Countries		product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
European Manufacturing Plants and/or Distribution Centers	OMAN	A	1 ³	1 ³	na
		B	2	2	
		C	2	2	
	POLAND	A	2	na	2
		B	2		2
		C	2		2
	PORTUGAL	A	2	2	2
		B	3 or 3a	2	2
		C	3 or 3a	2	2
	QATAR	A	1 ³	1 ³	na
		B	2	2	
		C	2	2	
	RUMANIA	A	2	1	2
		B	2	2	2
		C	2	2	2
	SAUDI ARABIA	A	1 ³	1 ³	na
		B	2	2	
		C	2	2	
	SCOTLAND (UK)	A	2	2	3 or 3a
		B	3 or 3a	2	3 or 3a
		C	3 or 3a	2	3 or 3a

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

³Level 1 pack will be the responsibility of the distribution facility at which the product leaves Digital's control.

Table 2 (Cont.): Packaging Level Selection Chart - European Countries

European Countries		product Group	Transport Mode ¹		
From	To		Air	Ocean ²	Overland
European Manufacturing Plants and/or Distribution Centers	SPAIN	A	2	na	3 or 3a
		B	3 or 3a		3 or 3a
		C	3 or 3a		3 or 3a
	SWEDEN	A	2	2	3 or 3a
		B	3 or 3a	2	3 or 3a
		C	3 or 3a	2	3 or 3a
	SWITZERLAND	A	2	na	3 or 3a
		B	3 or 3a		3 or 3a
		C	3 or 3a		3 or 3a
	TUNISIA	A	1 ³	1 ³	na
		B	2	2	
		C	2	2	
	TURKEY	A	2	1 ³	2
		B	2	2	
		C	2	2	
	UNITED ARAB REPUBLIC	A	1 ³	1 ³	na
		B	2	2	
		C	2	2	
	U.S.S.R.	A	2	1 ³	2
		B	2	2	2
		C	2	2	2
	YUGOSLAVIA	A	2	1 ³	2
		B	2	2	2
		C	2	2	2

¹The numbers listed under these columns designate minimum packaging levels; these levels are defined in subhead 2.2.

²All ocean shipments are containerized door-to-door.

³Level 1 pack will be the responsibility of the distribution facility at which the product leaves Digital's control.

3 CONTRACT CRATING

It has been Digital's policy practice to have special international containers built by contract "packaging houses" specializing in military packaging. Each distribution facility is responsible for contracting its own crating. For transport of hazardous materials, refer to EL-CP534-00, *Hazardous Materials/Dangerous Goods Policies and Procedures Manual*.

To fulfill minimum contract requirements for Levels 1 and 2, Digital domestic packages should be overpacked per DEC STD 045-1.

The contracting house is responsible for the following.

1. At Receiving, check all incoming inventory for condition of the packaging and order compliance. Immediately report any discrepancy to Digital.
2. Pack each Digital order (DEC numbers) separately. Intermix only with Digital approval. Consolidate shipments where possible.
3. Maintain an accurate listing of the number of pieces and the Digital piece numbers contained in each shipping case.
4. Communicate all details of shipping to Digital, including the number of pieces, weights, cubes and measurements, and the contents of all shipping cases.
5. As required, prepare metrics and/or reports and forward to Digital upon request.

APPENDIX A INTERNATIONAL DISTRIBUTION

A.1 INTERNATIONAL AIR PROGRAMS

Digital distributes products to over 75 countries in support of Field Service, Manufacturing, and Sales. These groups are responsible for the physical movement of products through a wide variety of transport systems. The following programs are currently considered and used in the selection of international packaging methods. For information on specific transportation policies, refer to *DEC STD 075-0 Transportation Policies and Requirements*.

A.1.1 COMMERCIAL AIR PROGRAMS

Air freight agents have been selected to provide distribution related services on behalf of Digital. Each agent has been individually contracted to provide a certain level of service to specific countries. This program provides the following benefits.

- a. Aggregation of freight results in lower freight rates and more predictable service.
- b. Digital's service criteria are prescribed and each agent is measured on their actual performance.
- c. Digital has increased control over the international freight handled by forwarders and carriers.
- d. Priority freight is transported on a next-available-flight basis, while routine freight is consolidated for scheduled service.

A.1.2 PALLET BUILD PROGRAMS

Digital uses existing resources to provide consolidation and containerization programs at the International Logistics Center (ILC) in Northboro. These programs support world-wide shipment activity and provide cost, material control, quality, and service benefits to end-users.

The ILC administers airline pallet build in support of Ireland, Scotland, Germany, and the Netherlands, as well as a structural container program for Japan. The ILC also administers product movement from the U.S. to Canada and Puerto Rico. ILC facilities are used (as required) for the on-site assembly of Level 1 and Level 2 packaging.

A.1.3 TRACKING AND TRACING CAPABILITIES

All international material that transits through the ILC can be tracked and monitored by the Distribution Services group on one of the automated systems currently available.

The ILC uses various material control systems to support multiple business processes within the ILC, and to provide product visibility from receipt of material at the ILC to the foreign port of entry. Many freight agents use on-line tracing systems or participate in electronic transmission of activity data to Digital.

A.1.4 PRIORITY SHIPMENTS

Shipping Bills of Authority (SBAs) marked "Export Priority" move through a distinct handling process. Special attention is given to priorities, enabling the shipment to flow through the documentation and shipping areas within certain time frames. Export priority shipments are pre-booked with the appropriate freight forwarder by the documentation group.

When the shipment arrives at the forwarders, it is matched with the preassigned air waybill and moves on the first available flight, which, to high-volume destinations, is generally on a daily basis. In addition, a unique air waybill permits an expedited clearance process at foreign customs.

Nowhere in this process are export priorities held for consolidation; therefore, the risk of damage in handling priority shipments is greater, and thus the package should be upgraded to provide extra protection, particularly against compression.

A.1.5 ROUTINE AIR SHIPMENTS

Routine material is transported by the Digital truck fleet to Digital's selected consolidation agent in Boston. This agent provides cross-dock and delivery services to the various air freight agents specified by Digital. When volume dictates, Digital bypasses the consolidation agent and tenders material directly to the air freight agent.

Consider the following when preparing air cargo for a routine shipment.

- a. **Handling** - Many large terminals are equipped with conveyor systems and mechanical cargo-handling gear, permitting rapid and safe cargo movement within the terminal. Overcrowded conditions contribute to handling damage as facilities are overtaxed. Manual handling is common as freight is stacked on pallets and in "igloos" which, if done improperly, can cause package failure in the form of excessive crushing.
- b. **Storage** - Modern terminals are equipped with segregated security areas for high-value cargo. Terminals not so equipped are subject to increased theft, pilferage, and deterioration hazards. Overcrowded conditions may require storage of some cargo outdoors exposed to the elements.
- c. **Ramps** - Cargo is commonly exposed to the weather while enroute to loading ramps. If cargo carts, pallets, and container openings are not adequately covered, water damage may result. High-value cargo is particularly susceptible to theft when not in the aircraft or the terminal.
- d. **Temperature** - Aircraft cargo compartment temperatures normally range between -1 and 21° C (30° and 70° F). If the aircraft is parked with cargo aboard in freezing or very hot weather, cargo will be subjected to unusual cold or heat conditions. Digital products and packages are tested to extreme temperatures and humidity per *DEC STD 102-01 Environmental Standard for Computers and Peripherals - Temperature, Humidity, and Altitude Test Requirements*.
- e. **Cargo compartments** - The main cargo compartments of air freighters are normally well equipped for adequate storage of cargo. Passenger aircraft belly compartments, however, are often loaded without provision for adequate restraint of cargo, permitting movement of cargo during flight and inviting damage from adjacent cargo.

A.2 INTERNATIONAL OCEAN SHIPPING PROGRAMS

Digital ships ocean containers from its Far East plants to U.S. and European distribution sites. Ocean containers are also shipped from the U.S. to Puerto Rico and European ports.

A.2.1 CONTAINERIZED SHIPMENTS

All shippers must examine each container prior to acceptance to ensure that it is clean, watertight, and in good repair. Digital has the right to and should refuse any container that does not meet standards.

A.3 INTERNATIONAL TRUCKING PROGRAMS

Historically, computer products have moved overland on air-ride vans because of their sensitivity to shock and vibration. However, recent emphasis has been placed on the economic benefits of designing product/packaging that can withstand the additional hazards of shipping via leaf-spring vehicles.

A.3.1 COMMON CARRIER (LEAF-SPRING VEHICLE) SHIPMENTS

Packaged products that have passed the requirements of *DEC STD 102-0 Environmental Standard for Computers and Peripherals - General Test Requirements* are adequately protected to withstand shock and vibration inherent in common carrier leaf-spring vehicles during over-the-road transport.

There is still concern about the possible hazards of dirt contamination as well as the possibility of Digital products being mixed with heavier, more diverse commodities present in the common carrier mode. These risks can be reduced if thoughtful choices are made in selecting carriers who are experienced at moving computer equipment.

Extra caution should be exercised when a carrier has little experience with computer equipment shipments. It is recommended that a record of successful shipments be established before a major commitment is made with such carriers, since they may not have the knowledge to handle sensitive computer equipment.

A.3.2 CANADIAN FREIGHT

Freight destined for Canada is trucked daily out of Northboro (NRO), where consolidation, documentation, and control are performed.

APPENDIX B REFERENCED DOCUMENTS

B.1 EL-Class Digital Documents

EL-Class Number	Document Title
EL-00043-00	<i>DEC STD 043-0 Packaging Requirements for Digital Products, Parts, Assemblies, and Materials</i>
EL-00044-00	<i>DEC STD 044-0 Packaging Documentation Requirements</i>
EL-00045-01	<i>DEC STD 045-1 Packaging Products for International Shipment - Design Requirements and Procedures</i>
EL-00075-00	<i>DEC STD 075-0 Transportation Policies and Requirements</i>
EL-00102-00	<i>DEC STD 102-0 Environmental Standard for Computers and Peripherals - General Test Requirements</i>
EL-00102-01	<i>DEC STD 102-1 Environmental Standard for Computers and Peripherals - Temperature, Humidity, and Altitude Test Requirements</i>
EL-CP534-00	<i>Hazardous Materials/Dangerous Goods Policies and Procedures Manual</i>
EL-MF425-00	<i>Procedures for Consolidating Packaged Products for Domestic and/or International Shipment</i>

Use VTX SMC to order copies of EL-class documents from Standards and Methods Control. Send distribution questions to JOKUR::SMC or call DTN: 234-4423.

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